WHAT IS CLAIMED IS:

1. A method of measuring a focal point on a transfer target having a pattern transferred thereon, comprising the steps of:

preliminarily forming, by transfer, at least two types of test resist patterns, which differ from each other in the pattern density, on said transfer target; and

calculating a focal variation of said transfer target using said individual test resist patterns.

2. The method of measuring a focal point according to claim 1, wherein

said test resist patterns include a first test resist pattern having a larger pattern density and a second test resist pattern having a smaller pattern density,

and the method further comprising the steps of measuring a first shape value of said first test resist pattern, calculating a proper exposure energy based on said first shape value, measuring a second shape value of said second test resist pattern, and calculating a focal variation of said transfer target based on said second shape value and said proper exposure energy.

3. The method of measuring a focal point according to claim 2, wherein said first test resist pattern shows a pivotal characteristic, and said second test resist patterns shows no pivotal characteristic.

4. The method of measuring a focal point according to claim 2, wherein said shape value is at least one of width, height and taper angle.

5. The method of measuring a focal point according to claim 2, wherein in the calculation of said proper exposure energy, said first shape value is measured, and then said proper exposure energy is determined using a first data base which expresses relations between said first shape value and said proper exposure energy.

6. The method of measuring a focal point according to claim 2, wherein in the calculation of said focal variation, said second shape value is measured, and then said focal variation is determined using a second data base which expresses relations of said proper exposure energy and said second shape value with said focal variation.

7. The method of measuring a focal point according to claim 1, wherein said individual test resist patterns are formed by transfer, together with resist pattern, by stacking at least one process target film and a resist film on said transfer target, and then subjecting said resist film to light exposure, and

said focal variation is calculated using results of measurement of optical constants and film thickness preliminarily made on at least either one of said process target film and said resist film.

8. The method of measuring a focal point according to claim 7, wherein the measurement of said optical constants and said film thickness is made on the entire stacked film having all of the individual process target films and said resist film formed therein by stacking.

9. The method of measuring a focal point according to claim 1, wherein the pattern is transferred under a proper amount of focusing, said amount of focusing being obtained based on said calculated focal variation, and being fed back to said individual transfer targets or to a product lot comprising a plurality of said transfer targets.

10. An instrument for measuring a focal point on a transfer target having a pattern transferred thereon, using at least two types of test resist patterns, which are first and second test resist patterns differed from each other in the pattern density, preliminarily formed on said transfer target; comprising:

a size measuring unit for measuring a first shape value of said first test resist pattern having a larger pattern density;

an exposure energy variation calculating unit for calculating exposure energy variation based on said measured first shape value;

a size measuring unit for measuring a second shape value of said second test resist pattern having

a pattern density smaller than said first test resist pattern; and

a focal variation calculating unit for calculating focal variation of said transfer target based on said measured second shape value and said exposure energy variation.

11. The instrument for measuring a focal point according to claim 10, wherein said first test resist pattern shows a pivotal characteristic, and said second test resist patterns shows no pivotal characteristic.

12. The instrument for measuring a focal point according to claim 10, wherein said shape value is at least one of width, height and taper angle.

13. The instrument for measuring a focal point according to claim 10, wherein said exposure energy variation calculating unit determines said proper exposure energy by using a first data base which expresses relations between said measured first shape value and said proper exposure energy.

14. The instrument for measuring a focal point according to claim 10, wherein said focal variation calculating unit determines said focal variation using a second data base which expresses relations of said measured proper exposure energy and said second shape value with said focal variation.

15. The instrument for measuring a focal point according to claim 10, wherein said individual test resist patterns are formed by transfer, together with

resist pattern, by stacking at least one process target film and a resist film on said transfer target, and then subjecting said resist film to light exposure, and

further comprising a measuring unit for measuring optical constants and film thickness, which preliminarily measures said optical constants and film thickness of at least either one of said process target film and said resist film, results of said measurement being used for calculating said focal variation.

16. The instrument for measuring a focal point according to claim 15, wherein said measuring unit measures said optical constants and said film thickness of the entire stacked film having all of the individual process target films and said resist film formed therein by stacking.

17. A method of fabricating a semiconductor device comprising:

a first step of forming a process target film on a semiconductor substrate;

a second step of forming a resist film on said process target film;

a third step of forming, by pattern transfer to said resist film, at least two types of test resist patterns differed from each other in the pattern density, together with a resist pattern;

a fourth step of calculating a focal variation of said process target film using said individual test resist patterns; and

a fifth step of judging whether said calculated focal variation falls within a specified range or not; wherein

the process advances to the next step if said focal variation was judged as being within the specified range, whereas said resist pattern and said test resist patterns are removed, and said second through fifth steps are repeated if judged as being out of the specified range.

18. The method of fabricating a semiconductor device according to claim 17, wherein said test resist patterns include a first test resist pattern having a larger pattern density and a second test resist pattern having a smaller pattern density; and

said fourth step further comprises the steps of measuring a first shape value of said first test resist pattern, calculating a proper exposure energy based on said first shape value, measuring a second shape value of said second test resist pattern, and calculating said focal variation of said transfer target based on said second shape value and said proper exposure energy.

19. The method of fabricating a semiconductor device according to claim 18, wherein said first test resist pattern shows a pivotal characteristic, and

said second test resist patterns shows no pivotal characteristic.

20. The method of fabricating a semiconductor device according to claim 18, wherein said shape value is at least one of width, height and taper angle.

21. The method of fabricating a semiconductor device according to claim 18, wherein in the calculation of said proper exposure energy in said fourth step, said first shape value is measured, and then said proper exposure energy is determined using a first data base which expresses relations between said first shape value and said proper exposure energy.

22. The method of fabricating a semiconductor device according to claim 18, wherein in the calculation of said focal variation in said fourth step, said second shape value is measured, and then said focal variation is determined using a second data base which expresses relations of said proper exposure energy and said second shape value with said focal variation.

23. The method of fabricating a semiconductor device according to claim 17, wherein in said third step, said optical constants and film thickness of at least either one of said process target film and said resist film are preliminarily measured, and results of the measurement are used for calculating said focal variation.

24. The method of fabricating a semiconductor device according to claim 23, wherein said optical constants and said film thickness are measured for the entire stacked film having all of the individual process target films and said resist film formed therein by stacking.

25. The method of fabricating a semiconductor device according to claim 17, wherein the pattern is transferred under a proper amount of focusing, said proper amount of focusing being obtained based on said focal variation calculated in said fourth step, and being fed back to said individual transfer targets or to a product lot comprising a plurality of said transfer targets.